1998 Georgia Solid Waste Management Annual Report

Georgia
Department of
Community Affairs

September 1999

Georgia Department of Community Affairs

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Forward

The 1998 fiscal year proved that Georgians still need to be concerned about solid waste management. As we prepare for the century's conclusion, the unprecedented growth in Georgia has forced local governments to reevaluate their commitment to providing solid waste services for their citizens and adjust their solid waste management practices to accommodate these changes.

Local governments and state agencies continue to strive toward the goal of having safer landfills that serve multiple jurisdictions. The number of unlined landfills decreased from 56 in FY97 to just 25 in FY98, while the amount of landfill remaining capacity increased from 220 million cubic yards to 278 million cubic yards. But, as landfill space continued to increase in FY98, so too did the opportunities for recycling.

Although the FY98 Solid Waste Management Survey and Full Cost Report did describe some encouraging news for the future, it also showed the state did not meet the 25% waste reduction goal as set forth in the 1990 Georgia Comprehensive Solid Waste Management Act. After decreasing in FY97, the amount of waste disposed of per capita increased by nearly 5% last year, moving Georgians further away from our goal. In FY97 we reported that Georgians disposed of 7.35 pounds per person per day. Last year, that figure jumped to 7.70 pounds per person per day, the largest amount since we began tracking disposal figures in 1992.

A major factor in this increase, besides the major economic and building growths in the state, was a number of natural disasters that once again hit major population centers of Georgia. An April flood in Albany came quickly, but left a great deal of damage behind. Nearly 4,600 tons of waste resulting from the flood were disposed of in landfills. About 700 tons of debris were disposed of in a privately-owned construction and demolition landfill after a tornado struck Gainesville and Hall County in March. Finally, tornadoes ripped through northern metro-Atlanta, damaging 4,000 homes, nine apartment complexes, and 250 businesses. More than four million cubic yards of waste - one-quarter of Georgia's normal waste stream - were produced in just minutes from these storms.

There are some encouraging trends, however, that may lead Georgia toward its waste reduction goal. Georgians have seen greater access to collection services, a large decrease in the number of green boxes and unmanned collection facilities, as well as greater private sector involvement. State agencies have also continued to implement strategies outlined in the *Georgia Solid Waste Management Plan: 1997*. The agencies encouraged waste reduction by local governments and businesses, integrated composting and recycling into solid waste management plans, and implemented new programs that focused on regionalization and the shift by many communities to the privatization of their solid waste management programs.

Solid waste management will remain a major issue in Georgia as we move into the 21st century, and local governments will continue to face many environmental challenges. There will be increased competition between the public and private sectors, but we also expect to see some consolidation and regionalization of services among local governments. We will have to continue our waste reduction committment despite relatively low disposal costs, while remembering the impact these practices can have on our environment. Under the leadership of the Governor and General Assembly, our agencies will continue to guard the health and quality of life of our citizens by seeking and supporting innovative and sound practices for managing the state's solid waste.

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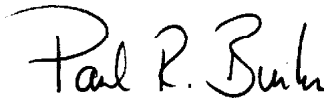


PAUL R. BURKS
EXECUTIVE DIRECTOR
GEORGIA ENVIRONMENTAL
FACILITIES AUTHORITY

Purpose of this Report:

The Georgia Solid Waste Management Annual Report provides a yearly update on the status of solid waste management in Georgia to the Governor and General Assembly.

Acronyms Used in this Report

C&D	Construction and Demolition Landfill
DCA	Georgia Department of Community Affairs
DNR	Georgia Department of Natural Resources
DRI	Developments of Regional Impact
EPA	US Environmental Protection Agency
EPD	Georgia Environmental Protection Division (DNR)
GEFA	Georgia Environmental Facilities Authority
GHEP	Georgia Hospitality and Environmental Partnership
KAB	Keep America Beautiful, Inc.
LDF	Local Development Fund
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
MSWL	Municipal Solid Waste Landfill
P²AD	Georgia Pollution Prevention Assistance Division (DNR)
RDC	Regional Development Center
RMPF	Recycled Materials Processing Facility
SWM	Solid Waste Management
UGA	University of Georgia

The Georgia Comprehensive Solid Waste Management Act of 1990 requires the Department of Community Affairs (DCA), with the cooperation of the Department of Natural Resources' Environmental Protection Division (EPD) and the Georgia Environmental Facilities Authority (GEFA), to provide an annual report on the status of solid waste management in Georgia to the Governor and General Assembly {O.C.G.A. § 12-8-31 (d)}. The Department of Natural Resources' Pollution Prevention Assistance Division (P²AD), created after the passage of the Act to encourage pollution prevention activities by business and industry, also contributed to this report.

As specified in the Act, the FY98 report, covering the period of July 1, 1997 to June 30, 1998, contains information on:

- the status of local and regional solid waste management planning in Georgia;
- the number and types of solid waste handling facilities in Georgia;
- the remaining capacity of each permitted solid waste handling facility;
- the number and types of solid waste grants and loans made to local governments;
- a compilation and analysis of solid waste management data provided by cities and counties through their completed 1998 Solid Waste Survey and Full Cost Report;
- a statement of progress achieved in meeting the 25% waste reduction goal established in subsection (c) of Code Section 12-8-21;
- any revisions in the state solid waste management plan deemed necessary; and
- recommendations for improving the management of solid waste in the state.

**On all tables in this report, percentages may total more than 100 because some local governments answered in multiple categories.*

**Some cities and counties that had not responded prior to publication of DCA's six previous reports complied with the reporting requirements at a later date. These late responses have been incorporated into DCA's database, sometimes leading to very slight discrepancies between historical figures shown in this report and numbers reported in previous years.*

Solid Waste Planning:

The Georgia Comprehensive Solid Waste Management Act requires local governments to have a solid waste management plan and include in that plan assurances of adequate disposal capacity and handling capability for a 10-year period.

Requirements of Solid Waste Planning in Georgia

The Minimum Planning Standards and Procedures for Solid Waste Management require local governments to make major amendments to their plans when changes occur that alter the basic tenets of the plans or affect another local government. At a minimum, major plan amendments include:

- changes that affect a local government's assurance of 10-year handling capability;
- changes that affect a local government's assurance of 10-year disposal capacity;
- changes that affect a local government's strategy toward achieving the 25% statewide waste reduction goal;
- changes that affect the identification of land areas unsuitable for a solid waste handling facility, or changes in any solid waste facilities, such as new facilities or major modifications of existing facilities, requiring EPD permits.

Under the Georgia Comprehensive Solid Waste Management Act of 1990, all Georgia local governments were required to prepare or be included in a 10-year solid waste management plan by July 1, 1993. Of the state's 692 local governments, 686 had an approved plan by the end of fiscal year 1998. The majority (80%) of governments opted to prepare joint plans that include a county and one or more cities within that county, while only 6% developed plans that pertain solely to their jurisdictions.

Regional planning efforts, including two or more counties, were undertaken by 14% of Georgia's local governments. Only one county and six cities failed to submit a solid waste management plan to DCA for approval by the end of FY98. Local governments that do not have an approved solid waste management plan are listed in Appendix A.

Georgia's Minimum Planning Standards and Procedures for Solid Waste Management require that solid waste management plans be updated every five years. Specifically, local governments must submit a short term work program update to DCA that covers the final five years of the 10-year planning period. The update reports on the status of a local government's progress toward implementing the programs originally identified in the plan. Also included are budgets, financing mechanisms, and timeframes for implementation.

The short term work program allows a local government the opportunity to reevaluate its current and future solid waste management and waste reduction programs. By June 30, 1998, 320 local governments were required to prepare short term work program updates. Only nine local governments failed to submit a short term work program update to DCA. These governments are listed in Appendix A.

DCA will continue to provide technical assistance to the 283 cities and counties that are required to prepare short term work programs in fiscal year 1999. The process requires that local governments submit short term work programs to their regional development centers (RDCs) for review and to DCA for approval or risk losing their eligibility to receive state authorized solid waste permits, grants, and loans.

Solid Waste Management Assistance Available

Despite the best efforts of the State and all Georgians to reduce waste, it is anticipated that solid waste management facilities, particularly landfills, will always be needed in the state. In addition to Subtitle D landfills for MSW, Georgia has numerous C&D and inert waste landfills. Design, construction, and operating standards vary for these landfills based on their location, the types of materials they receive, and the potential environmental risks associated with their operations.

As part of its technical assistance responsibilities, DCA provides assistance to local governments on non-environmental matters relating to solid waste disposal, primarily in analyzing costs, fees, regionalization, and privatization options.

Since passage of the Georgia Comprehensive Solid Waste Management Act in 1990, DCA has assisted local governments in exploring disposal options through workshops, publications, and one-on-one consultation. DCA has also facilitated regional efforts and educated local government officials on the costs associated with operating Subtitle D landfills and on establishing enterprise funds.

As a result of more stringent design standards, landfills have decreased in number and increased in quality. EPD has the responsibility of permitting solid waste facilities in Georgia. EPD ensures that current siting criteria and design standards are uniformly applied to all new landfills and verifies that facility construction is in accord with approved design plans and permits. EPD also inspects all sites semi-annually and provides timely and appropriate enforcement actions to ensure compliance with permit conditions. Additionally, EPD confirms the adequacy of groundwater monitoring at no less than 10% of landfills annually.

GEORGIA PLANNING ACT REQUIREMENTS

To assess potential impacts of new and expanding solid waste disposal facilities on surrounding jurisdictions, rules developed pursuant to the Georgia Planning Act require that such facilities be reviewed as Developments of Regional Impact (DRIs). In addition to ensuring that proposed projects are consistent with the comprehensive and solid waste management plans of all potentially affected jurisdictions, the DRI review process considers impacts on the region's natural resources, economy, and public infrastructure. Ideally, the DRI review process also identifies opportunities for cooperation and recommends the construction of facilities that will serve more than one local government where appropriate.

Since 1991, 25 proposed solid waste disposal facilities have been reviewed as DRIs. Between July 1997 and June 1998, two new solid waste projects were proposed, including one Subtitle D landfill to be located in Forsyth County and one C&D landfill in Douglas County. In addition, Phase 3 of the existing Bartow County Emerson Municipal Solid Waste Landfill was proposed. As a result of the DRI process, all of the landfill projects proposed in FY98 were found to be in the best interest of the state.

The Georgia Planning Act also requires RDCs to develop regional comprehensive plans, which must include solid waste management where it is considered by the RDC board to be of regional significance. To begin this process, RDC staff members prepare an inventory and analysis using the local comprehensive plans developed within their region. Based on this document, the RDC board determines an implementation strategy, which becomes the functioning plan.

A total of 14 regional plans will be completed by fiscal year 2000. To date, over half of the regional plans have been approved by DCA and adopted by the participating regions. Each of the plans addresses solid waste management issues, though the references may be minimal.

Waste Reduction Goal:

The Georgia Comprehensive Solid Waste Management Act of 1990 established a per capita goal of reducing the amount of MSW entering disposal facilities by 25 percent. The goal was set on a statewide basis, recognizing that local governments vary in their ability to recycle and reduce their waste streams.

Tracking the Progress of the Waste Reduction Goal

Georgia, as with most other states, set a specific waste reduction goal and a specific date by which to reach the goal. July 1, 1996 was selected as the target date to meet the waste reduction goal of 25 percent, and 1992 was selected as the base year to which figures would be compared. Georgia has faced many obstacles in trying to reach this goal.

The amount of waste generated per person rose last year, in part, due to natural disasters that hit Georgia.

An April flood in Albany resulted in nearly 4,600 tons of waste being disposed of in landfills. About 700 tons of debris were disposed of in a privately-owned C&D landfill after a tornado struck Gainesville and Hall County in March. Finally, tornadoes ripped through northern metro-Atlanta, damaging 4,000 homes, nine apartment complexes, and 250 businesses. More than four million cubic yards of waste - one-quarter of Georgia's normal waste stream - were produced from these storms.

In addition, several factors affect the ability to accurately compute this percentage:

- most landfills operating in the state in 1992, the base year, did not have scales;
- nearly half of the landfills closed between 1992 and 1996 and the waste was diverted to other facilities;
- finally, many landfills had a hard time changing from manual record keeping to computerized systems.

Nevertheless, the State is working with landfill operators to improve reporting methods to ensure more accurate information is provided. To better determine waste reduction efforts in Georgia, DCA has revised its local government solid waste survey to obtain more accurate information.

Per Capita Solid Waste Disposal Increases

Georgians disposed of more pounds of solid waste per person last year than in any year since record keeping began in 1992. In FY98, Georgians disposed of 10,745,331.12 tons of solid waste, or 7.70 pounds per capita per day.[1]

The residents of Georgia disposed of 8% more waste per capita in FY98 than in FY92, the base year for calculations. The base year disposal figure is 8,604,115 tons or 7.11 pounds per capita per day.

Although Georgia's 25% waste reduction goal was originally set in terms of a calendar date that has passed (July 1, 1996), the goal is still in effect. According to an opinion issued by State Attorney General Thurbert Baker in July 1997, the intent of the original legislation was "the requirement of active involvement in programs for reducing waste." Baker wrote that state and local efforts to meet the goal should continue.

In order to meet the 25% solid waste reduction goal, the state will have to reduce waste disposed of to 5.33 pounds per person per day. To meet that goal, Georgians will need to reduce waste by 31% from the FY98 figure.

Although out-of-state waste continues to increase, its effect on Georgia's disposal figures is minimal. The amount of waste coming into Georgia increased again last year, as it has every year since 1992. In FY98, 193,819 tons of out-of-state waste were disposed of in Georgia, an increase of 13% over the FY97 figure. Out-of-state waste accounts for less than 2% of the state's waste stream.

Of the waste disposed of during FY98, 84% was disposed of in municipal solid waste landfills (MSWLs), and 16% was disposed of in construction and demolition landfills (C&Ds). While the amount of waste continues to increase, so has the amount of waste being disposed of in lined landfills. Of the tons disposed of in MSWLs, 81% (or 7.3 million tons) went to lined landfills. In FY97, 73% of MSW went to lined landfills, while only 65% went to lined landfill facilities in FY96.

[1] An additional 112,546.66 tons were disposed in the state's only waste-to-energy facility. This amount is not included in calculating progress toward the 25% waste reduction goal per a 1993 amendment to the Georgia Comprehensive Solid Waste Management Act.

SOLID WASTE DISPOSAL IN GEORGIA*

	Millions	Millions of Tons			Pounds Per Person Per Day		
FY	Population**	Disposed	In-State	Out-of-State	Total	In-State	Out-of-State
1992	6.63	8.60	NA	NA	7.11	NA	NA
1993	6.77	8.25	8.15	0.10	6.68	6.59	0.08
1994	6.90	8.58	8.45	0.14	6.81	6.70	0.11
1995	7.06	9.54	9.38	0.16	7.41	7.28	0.12
1996	7.21	9.78	9.61	0.16	7.43	7.31	0.12
1997	7.35	9.86	9.69	0.17	7.35	7.22	0.13
1998	7.64	10.75	10.55	0.19	7.70	7.56	0.14

** Disposal figures were compiled by EPD based on landfill reports; numbers may not equal due to rounding.*

*** Population figures were provided by the US Census Bureau.*

Results of SWM Survey:

Solid Waste Management and the Citizens of Georgia

The information collected through the annual Solid Waste Management Survey and Full Cost Report forms the basis for this statewide annual report on solid waste. The survey provides useful information for planning, evaluation, and public education purposes.

Within 30 days of submitting its annual survey to DCA, each local government must publish a public notice listing the full cost of providing solid waste services to constituents within its jurisdiction. By disclosing these costs, the full cost report is intended to educate citizens on the need to manage waste properly and effectively.

The conclusions reached in this annual report are based primarily on DCA's Solid Waste Management Survey and Full Cost Report. Information on disposal facilities and remaining permitted capacity figures were provided by EPD.

The Solid Waste Survey and Full Cost Report serves as the main source of information on Georgia's solid waste management system.

Under the Georgia Comprehensive Solid Waste Management Act of 1990, each local government must submit an update to DCA documenting the status of its solid waste services. DCA collects this information through the Solid Waste Management Survey and Full Cost Report.

Local Governments Report Results

The 1998 Solid Waste Survey and Full Cost Report was disseminated to the state's 159 counties and 533 cities to cover the reporting period of July 1, 1997, through June 30, 1998. The survey consisted of 53 questions, some with multiple parts, designed to measure the level of solid waste services provided and the cost of these services.

Each of the state's 159 counties responded to the 1998 survey. Of the 533 municipalities, 516 (96.8%) responded to the survey. Each of the 17 governments failing to submit a survey during the time period covered by this report has a population of 1,500 or less. Georgia's three consolidated governments (Athens-Clarke County, Augusta-Richmond County, and Columbus-Muscogee County) are treated as counties for the purpose of the survey.

Some cities and counties that had not responded prior to publication of DCA's six previous annual reports complied with the reporting requirements later. These late responses have been incorporated into DCA's database, sometimes leading to very slight discrepancies between historical figures shown in this report and numbers reported in previous years.

Information from the survey has been divided into sections on Solid Waste Collection, Recycling, Yard Trimmings Management, Solid Waste Disposal, Solid Waste Education, and Full Cost of Solid Waste Management. The Solid Waste Disposal section has been supplemented with landfill data provided by EPD, which requires permitted solid waste facilities to report tonnages disposed of and origins of waste on a quarterly basis.

Local Governments Not Responding to DCA's 1998 Solid Waste Survey and Full Cost Report

City of Andersonville
City of Avalon
City of Broxton
City of Buena Vista
City of Chauncey
City of Coolidge
City of Corinth
City of Damascus
City of Demorest
City of Flowery Branch
City of Luthersville
City of Mineral Bluff
City of Montrose
City of Oconee
City of Payne City
City of Resaca
City of Talmo

Solid Waste Collection:

Local governments use a variety of methods to arrange for collection of solid waste, including directly providing the service themselves, arranging for another local government or authority to provide the service, and working with private vendors.

Tracking the Trend - Green Box Usage Declining

For the first time since solid waste information has been collected for this annual report, the use of green boxes as a method of solid waste collection has dipped below 50% for Georgia counties offering residential collection services.

Green boxes, a common name for large, unmanned solid waste collection bins, were used by as many as 77 counties as recently as FY96. With just 46 counties reporting using green boxes during FY98, the percentage of counties that offer residential collection services by using green boxes is just 43%.

Since FY93, 53 counties and 20 municipalities have discontinued the use of green boxes. In general, local governments have ceased using green boxes because these unstaffed drop-off boxes can lead to unattractive and unhealthy collection sites along with rampant illegal dumping.

Another deterrent to green boxes includes the lack of accountability for waste generation and disposal.

Minimizing the use of green boxes is an important element in improving solid waste management in Georgia.

Unit-Based Pricing/Pay-As-You-Throw Residential Programs in Georgia (FY98)

Athens-Clarke Co.	City of Cleveland
Coweta County	City of Douglasville
Gilmer County	City of Duluth
Oconee County	City of Jackson
Pierce County	City of Marietta
Pike County	City of Morrow
Tift County	City of Moultrie
Ware County	City of Nelson
White County	City of Snellville
City of Ailey	City of Thomasville
City of Austell	City of West Point

Local Governments Take Control of Collection Options

The majority of local governments in Georgia (82%) arrange for solid waste collection services in their jurisdictions. While almost all of these jurisdictions provided or arranged for residential collections, 45% of the counties and 60% of the cities also provided or arranged for collection of commercial solid waste. The number of local governments providing commercial collection decreased from 375 in FY97 to 314 in FY98.

Local governments use a variety of methods to arrange for collection of solid waste, including directly providing the services themselves, arranging for another local government or authority to provide the service, and working with private vendors. A larger percentage of local governments reported arranging collection directly (86%) rather than arranging for collection through a private vendor (54%), reversing a two-year trend. The number of local governments providing solid waste services through another government decreased this year from 16% to 10%, but the number of governments relying on an authority to provide these services increased from 3% to 5%.

SOLID WASTE COLLECTION	COUNTY	CITY
Arrange for Collection	**112**	**439**
Arrange Collection Through	**%**	
Own Government	85	87
Another Government	11	10
Authority	10	4
Private Vendors	62	53
Other	2	1
Arrange for Residential Collection	**106**	**440**
Collection Methods	**%**	
Curbside/Backdoor	43	94
Staffed Drop-off Centers	43	5
Unstaffed Drop-off Centers	18	6
Green Boxes	43	11
Fees Charged for Residential Collection	**40**	**348**
	%	
Flat-Rate	88	96
Unit-Based	23	4

On all tables in this report, percentages may total more than 100 because some local governments answered in more than one category.

In FY98, the preferred method of residential waste collection in municipalities where this service was available was curbside pickup (94%), which continues to increase in popularity. In counties with residential collection services, green boxes - dumpsters scattered throughout the county - are no longer the most preferred method of residential collection. Although use of green boxes continues to decline, it is a method still used by 43% of the counties. Counties are changing from the green boxes and unmanned drop-off centers to staffed drop-off centers, which increased from 37% to 43%, and curbside service, which increased from 27% to 43%.

A significant decrease in the number of green boxes being used was recorded in FY98. In FY97, 9,525 boxes were in place throughout the state compared to just 1,946 in FY98. With 94 local governments reporting the use of green boxes, the average number of boxes dropped from 93 to 21 boxes per government.

Of the governments arranging for residential collection, 38% of counties and 79% of municipalities charged a fee for the service, a decrease of ten local governments compared to FY97. Although a majority charged residents a flat fee, nine counties and 13 municipalities charged residents a fee based on the amount of waste disposed. These unit-based pricing systems encourage waste reduction by making each user financially responsible for their disposal habits.

Recycling & Waste Reduction:

Revamped Curbside Program Increases Local Participation

After struggling with low participation rates and eventually discontinuing its curbside recycling program, the consolidated government of Augusta-Richmond County once again is picking up items at the curb.

The City of Augusta began its curbside recycling program in 1992 by using the blue bag method in which residents placed all materials to be recycled in a blue plastic bag supplied by the City and left it at the curb for pickup. The bag would then be replaced with a new one.

The system began to unravel when the city and county governments merged in 1995. Residents had to pick up the bags instead of having them delivered and many residents thought the program had been discontinued. Participation rates dropped to less than 20% yet the program cost the consolidated government nearly $300,000 annually to operate.

The low participation rate led to the curbside program ultimately being dropped and replaced with five convenience centers. The centers were successful because they were located throughout the county, whereas the previous curbside program serviced only the Augusta "urban district."

Residents, however, continued their interest and asked the government to reinstate and expand a curbside recycling program. The consolidated government responded with a program that will use bins instead of bags and will be available to all residents in the area.

Waste reduction refers to a reduction in the amount of waste generated or in the amount of waste thrown away. One method of reducing the amount of waste disposed of is reusing the material at the point of generation. A higher-profile method of reducing waste is recovering material for recycling.

Recycling Services Increase Despite Market Slip

Recycling puts materials that otherwise would be discarded to use as raw materials in the production of new products. In FY98, 90% of counties and 69% of municipalities reported that recycling services were available to their residents. By contrast, in FY92, the first year of the survey, 77% of all counties and just 54% of all cities had recycling services available. All cities with populations greater than 25,000 had recycling services available to their residents, while only half of the cities in Georgia with populations less than 1,000 had recycling available locally.

Businesses and industries had access to recycling services in 74% of Georgia's counties and 49% of cities in FY98. Both figures are fairly similar to the figures posted in FY97, but are still well under the totals of FY96 when 84% of counties and 65% of municipalities - more than 106 local governments in all - reported that recycling services were available to businesses in their jurisdictions. Again, the smaller the municipality, the less likely it is providing this service.

In an interesting change of events reflecting the struggle of many involved in the recycling industry during FY98, the number of local governments using private vendors to provide recycling services for residents dropped remarkably, while residential services provided by not-for-profit groups increased. Only 8% of counties relied on private vendors in FY98, compared to 43% of counties in FY97. Conversely, the use of not-for-profit organizations for residential recycling services increased from 28% to 48% of the counties in FY98.

RECYCLING WASTE COLLECTION	COUNTY	CITY
Recycling Services Available for Residents	**143**	**354**
Arrange Services Through	**%**	
Own Local Government	75	39
Another Local Government	22	32
Private Vendor(s)	8	26
Not-for-Profit Organization	48	40
Solid Waste Authority	12	16
Collect and Process Through	**%**	
Curbside Recycling	20	42
Staffed Drop-off Facilities	55	29
Unstaffed Drop-off Facilities	52	49
Materials Recovery Facility	9	6
RMPF	8	2
Accepted at Landfill	42	12
Reuse Programs	28	13
Other	8	4
Recycling Services Available for Businesses	**117**	**251**
Arrange Services Through	**%**	
Own Local Government	62	34
Another Local Government	20	32
Private Vendor(s)	62	48
Not-for-Profit Organization	38	21
Solid Waste Authority	8	17
Other	5	2
Collect and Process Through	**%**	
Curbside Recycling	21	43
Staffed Drop-off Facilities	49	31
Unstaffed Drop-off Facilities	42	46
Materials Recovery Facility	9	6
RMPF	11	4
Accepted at Landfill	37	10
Reuse Programs	15	4
Other	11	6
Purchased Recycled Products	**130**	**322**

Government Struggles with Curbside Recycling Program

Low participation rates have put the City of Macon's recycling program on the ropes, and it struggles in one last attempt to make it work.

Macon residents received collection bins from the City's Public Works Department and were asked to fill the containers and place them on the curb with their garbage. Residents were less than enthusiastic, posting a skimpy 20% participation rate. Residents are not charged specifically for the recycling service, although they are charged a $5 per month fee for their entire solid waste disposal service, including recycling.

The program initially distributed a great deal of publicity to the public, but that ended shortly after the program was introduced. As participation rates plummetted and costs increased, City officials have been forced to look at the feasibility of the program. The City, however, does not want to give up on recycling.

Prior to the introduction of the curbside program, Macon provided unmanned recycling drop-off sites for the residents. If the curbside program is eliminated, the city will more than likely revert back to some sort of drop-off center.

Public Works officials, however, hope for something more developed than just an unmanned facility. If they have to revert back to a collection facility, it is hoped that a buy-back center can be established that would pay residents for their recyclables to really encourage people to recycle.

Curbside collection is generally more costly for local governments, but it is more effective in garnering resident participation. Of the local governments in Georgia, 36% rely on curbside collection to provide recycling services. Drop-off centers, however, are still the most popular means of collecting recyclables. Half of the local governments in Georgia offered unstaffed recycling centers in FY98, while 37% offered staffed drop-off centers. The practice of sorting commingled residential recyclables at recovered materials processing facilities (RMPFs) is still rare in Georgia, with only 19 local governments using this type of facility. Separating recyclables from solid waste at a materials recovery facility (MRF) is slightly more common, with 33 local governments recovering recyclables in this way.

Newspaper remains the most commonly accepted item for residential recycling. Aluminum, magazines, corrugated cardboard, glass, plastics, white goods, scrap metal, Christmas trees, and phone books are all recycled in more than half of the residential programs offered by local governments. Newspaper is also the most popular item recycled in commercial programs, followed by cardboard and aluminum.

Larger items that are more difficult to collect in curbside programs are more likely to be recycled in counties than in cities. These items are easily separated at transfer stations and landfills, which are more often managed by counties. For example, 78% of all counties with recycling services make white goods recycling available while only 42% of cities offer it.

RECYCLING COLLECTION	COUNTY	CITY
Recycling Services Available for Residents	143	354
Materials Recycled	%	
Aluminum	83	80
Newspaper	87	94
Magazines	69	61
Corrugated Cardboard	85	62
Other Paper	58	44
Glass	65	68
PET and HDPE Plastics	61	64
Other Plastics	21	21
White Goods	78	42
Christmas Trees	62	52
Construction/Demolition	22	8
Steel Cans	48	34
Aerosol Cans	10	9
Paper Board	33	22
Scrap Metal	77	32
Motor Oil	39	16
Phone Books	52	45
Agricultural Chemical Containers	13	3
Antifreeze	10	3
Oil Filters	6	3
Paint	5	3
Cleaning Products	3	2
Pesticides	1	1
Household Hazardous Waste	1	1
Other	5	4
Recycling Services Available for Businesses	117	251
Materials Recycled	%	
Tires	49	20
Batteries	34	18
Aluminum	83	77
Newspaper	87	88
Magazines	70	62
Corrugated Cardboard	86	78
White Paper	63	55
Green Bar Computer Paper	53	49
Other Paper	50	45
Glass	57	65
Plastic	55	62
Phone Books	54	52
Pallets	30	13
Scrap Metal	74	39
Motor Oil	34	18
Wood Waste	21	12

Yard Trimmings/Composting:

Under the Georgia Comprehensive Solid Waste Management Act, effective September 1, 1996, each city, county, and solid waste management authority must require separation of yard trimmings from solid waste before collection and keep those yard trimmings out of MSWLs with vertical expansions or with liners and leachate collection systems.

Prison Programs Advance Composting and Recycling

The Georgia Department of Corrections (GDC) has set up recycling and composting operations at six Georgia prisons to remove both recyclable materials and kitchen food waste from the waste stream, not only benefiting the environment but also saving transportation and disposal costs.

The composting operations process prison kitchen food waste with yard trimmings from nearby communities. The program began at the Georgia Diagnostic and Classification Prison in Jackson during the fall of 1993 and has saved participating facilities about 63% of their waste disposal fees.

The program was initiated when some local landfills near GDC facilities banned prison kitchen food wastes. Other GDC facilites were in violation of EPD waste water treatment regulations. In addition, there was a continued threat to GDC of surcharges by local governments in reaction to increased overloading of their sewage treatment facilities with food waste from nearby prisons.

Combined, the six sites divert more than 8,500 tons of waste from landfills and save GDC and local communities more than $250,000 annually. The amount of money raised from selling the recyclables partially offsets the cost of operating the program. In addition, the program produces compost with an estimated value of $100,000.

Yard Trimmings Diversion Remains Steady

Since the inception of the ban on yard trimmings entering landfills went into effect in 1996, cities and counties have required separation of grass clippings and yard trimmings from municipal solid waste and C&D waste. According to survey results for FY98, 80% of Georgia's local governments have met this requirement. Of this group, 64% of counties and 76% of cities provided, or arranged for, the collection and an alternative use or disposal of yard trimmings within their jurisdictions.

Cities, which have a smaller land area and higher population density than most counties, are in a much better position to provide curbside collection of yard trimmings. In FY98, 94% of the cities provided for yard trimmings collection at the curb, while just 19% of counties offered the same service. Counties, on the other hand, tend to have collection points or drop-off facilities for residents.

YARD TRIMMINGS MANAGEMENT	COUNTY	CITY
Require Separation of Yard Trimmings	**134**	**404**
Promote Home Composting and Grasscycling	**40**	**56**
Provide for Collection and Disposal of Yard Trimmings	**86**	**307**
Collection Options	**%**	
Staffed Drop-off Facilities	47	6
Unstaffed Drop-off Facilities	12	5
Curbside Collection	19	94
Accepted at Landfill	57	13
Other	12	3
Processing Methods	**%**	
Composting	23	25
Solid Waste Landfill	1	11
Inert Landfill	51	34
Grind/Chip into Mulch	63	63
Burning	0	8
Other	1	2

Most of these local governments processed their collected yard trimmings using the preferred methods listed in the legislation - 63% chipped yard trimmings into mulch and 25% composted the materials. More than a third of the local governments handling yard trimmings simply diverted the waste from a solid waste landfill to an inert landfill after collection. Just one county and 35 cities reported disposing of their yard trimmings in a solid waste landfill.

Solid Waste Disposal:

Local governments are encouraged to optimize their disposal options and minimize costs by coordinating their solid waste efforts through multi-county or authority landfill agreements. In FY98, 11% of counties and 9% of municipalities reported being involved in these agreements.

Local Government Disposal Practices

Although the majority of Georgia's landfills are publicly-owned and operated, only 39% of municipal solid waste goes to publicly-owned landfills while 61% of municipal solid waste goes to privately-owned facilities. The percentage of local governments delivering solid waste to public landfills has continued to decline, although 54% of cities and 59% of counties still use public landfills as the primary delivery point for waste. Counties were more likely to own the landfill themselves (59%), while cities were more likely to send waste to a facility owned by another government (89%). From FY97 to FY98, local governments continued the trend of moving away from the use of public disposal facilities to private ones. In FY97, 415 local governments disposed of waste in public landfills, and 195 local governments reported using private landfills. In FY98, 371 local governments disposed of waste in public landfills, and 225 local governments reported using private landfills. Since FY96, 107 local governments have stopped using public landfills. (Many local governments have traditionally reported using more than one type of disposal facility, accounting for the significant reduction in the use of public landfills without a corresponding increase in other areas.) Only a few local governments used a waste-to-energy facility for MSW, employed air curtain destructors or biomedical waste incinerators for special wastes, or shipped their waste out of state.

LOCAL GOVERNMENTS OPERATING WASTE FACILITIES

	County	City
Transfer Stations	47	16
Materials Recovery Facilities	10	4
Inert Waste Landfills	56	53
C&D Landfills	21	5
MSW Landfills	54	8
Incinerators	2	2

The number of local governments owning MSWLs in FY98 decreased from 62 in FY97 to 54. This follows a downward trend since the question was first asked in the FY93 survey. In FY93, 166 local governments owned MSWLs. Many local governments now rely on transfer stations, which allow individuals and small haulers to bring their waste to a centrally located facility before it is transferred to a landfill, often in a different county.

There are six types of waste facilities currently in operation by local governments in Georgia: transfer stations, materials recovery facilities, inert waste landfills, C&D landfills, MSW landfills, and incinerators. The table above shows the number of local governments operating different types of solid waste facilities. Although Georgia has only one MSW waste-to-energy facility, several local governments reported operating incinerators. These were air curtain destructors, generally used to dispose of wood wastes, or biomedical incinerators.

Convenience Centers Offer Local Governments Control

As noted earlier, more and more local governments have abandoned the practice of using green boxes, or unmanned collection centers, as the primary means of collecting solid waste in their jurisdictions. The green boxes were normally located on major thoroughfares in the area so they would be convenient to the majority of citizens. Many of them were eyesores and were constant sources of litter.

For many of the governments that wanted to eliminate green boxes but did not find the idea of curbside collection economically feasible, a change to staffed convenience centers provided a sound solution to the problem.

Convenience centers are typically installed at fewer locations than the old green box sites, thus requiring some residents to travel further distances to dispose of their waste. One of the chief advantages, however, is that they are easier for local governments to manage.

The centers are usually fenced in to keep out scavengers and minimize the unsightliness associated with open dumpsters. Separate containers for recyclable materials can be set up and monitored, thus allowing for more successful recycling programs. Convenience centers can be easily staffed and operate regular hours. They can realize a cost savings over the old green box sites because there are fewer locations for collection vehicles to service and less maintenance required.

An important aspect to keep in mind, however, is that some sort of educational program must be put into place to ensure that local residents understand the change. Also, no matter how easy the local government makes the new system, some people will still be unhappy with the transition, and illegal dumping and littering may be a problem during the change-over stage. Local governments must be prepared to enforce ordinances that address such problems.

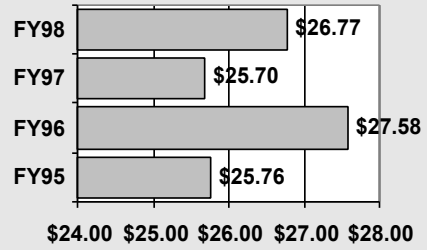
MSW Handling Facilities:

Tracking the Trend - Landfill Tipping Fees

Local governments recover a portion or all of the costs associated with operating a solid waste landfill by charging a tipping fee, or a charge per ton for waste disposed at their facility.

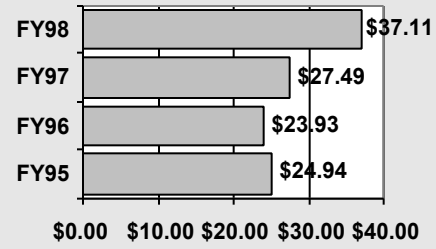
Counties

Between FY95 (the first year DCA began collecting tipping fee data) and FY98, the average tipping fee charged by Georgia counties increased by $1.88, from a low of $25.70 in FY97 to a high of $27.58 in FY96.



Cities

Between FY95 and FY98, the average tipping fee charged by Georgia cities increased by $13.18, from a low of $23.93 in FY96 to a high of $37.11 in FY98.



REMAINING CAPACITY*

(MILLIONS OF CUBIC YARDS)

MSWLs (total)		259.38
Lined MSWLs	248.27	
C&Ds		18.90
Total		**278.28**

* *Data provided by EPD.*

The number of unlined landfills continues to decrease dramatically because of the 1993 statute that required vertically expanded, unlined landfills to cease accepting waste by July 1, 1998. With regulations in place requiring liners for landfills, fewer new landfills are opening, but capacity continues to increase.

Disposal Facilities and Remaining Capacity

Remaining consistent with the State's goal of closing unlined landfills, the number of solid waste landfills has decreased since 1996, even though the number of Subtitle D landfills in Georgia has increased. Because the newer Subtitle D landfills are more expensive to construct and difficult to site, they are generally built with greater capacity than the old unlined landfills. As numerous unlined landfills close, there are only a few lined landfills opened to meet current disposal capacity needs. Of the MSWLs operating in FY98, 60 were owned by local governments and 16 were owned by private firms. Of the C&D landfills, 22 were publicly owned and 12 were owned by private firms.

Inert landfills, which are permit-by-rule facilities, continue their rapid growth, increasing by more than 100 in FY98 and by nearly 500 since FY96. These are often very small landfills at construction sites and are used only for the duration of the construction project. Inert landfills accept wastes that are limited to earth and earthlike products, concrete, cured asphalt, rocks, bricks, yard trimmings, and land clearing debris. Users of this method simply notify EPD instead of completing the full permitting process. Many of these may be closed, however, because owners do not always notify EPD about the inert landfill's closure.

SOLID WASTE HANDLING FACILITIES*	1997	1998
Municipal Solid Waste Landfills	**95**	**76**
Subtitle D and Lined**	39	51
Unlined	56	25
Construction & Demolition Landfills	**35**	**34**
Landfills That Ceased Receiving Waste	**12**	**29**
Industrial Solid Waste Facilities	**76**	**72**
Industrial Waste Landfills	57	55
Industrial Waste Incinerators	6	5
Other	13	12
Permit-by-Rule Facilities	**2,646**	**2,842**
Inert Landfills	1,990	2,101
Transfer Stations	127	139
Collection Operations	398	469
Other	131	133
Waste-to-Energy Facility	**1**	**1**
Additional Facilities	**5**	**5**
Materials Recovery Facilities	3	3
MSW Composting Facilities	2	2

* *Data provided by EPD.*

** *Subtitle D landfills are built to current Environmental Protection Agency requirements. Some lined landfills were built before the Subtitle D landfill regulations were completed and may not meet all of the requirements. In FY98, 35 Georgia landfills met Subtitle D requirements compared to 26 in FY97.*

FY98 growth in remaining capacity of Georgia's MSWLs and C&Ds increased last year by 26% after a growth of just 3% in FY97. As of June 30, 1998, 92% of Georgia landfills reported a total remaining capacity of 278,285,726 cubic yards. The majority of the remaining capacity, 259,383,011 cubic yards, was in MSWLs. From FY97 to FY98, the rate of fill increased by 4% from 54,631 to 56,942 cubic yards per day. As of June 30, 1998, Georgia has an estimated 18 years of remaining landfill capacity. The construction of eight new MSWL facilities and one C&D facility will provide an additional 25 million cubic yards of permitted capacity.

Solid Waste Public Education:

Public education is an important component of a successful solid waste management program. Innovative lessons have been put in place in many parts of the state to teach all age groups about the need for proper waste handling methods.

Solid Waste Education Efforts Increase

In FY98, 53% of Georgia counties and 28% of municipalities reported having solid waste/environmental public education programs. This is a slight increase over the figures reported by local governments in FY97. In FY98, 227 local governments had some sort of education program for their residents. Since FY96 however, 31 local governments have stopped offering solid waste management educational programs.

Of the local governments with educational programs in place, 71% of the counties and 70% of the cities reported being affiliates of Keep America Beautiful, Inc. (KAB). These affiliates are also supported by DCA's Keep Georgia Beautiful program, the state KAB affiliate. Most counties (96%) and cities (67%) with education programs contributed financial resources to education efforts.

Enforcement Education Highlights State's Efforts

Taking a proactive stance toward litter and other environmental issues, many communities in Georgia have hosted conferences targeting "crimes against the environment" to highlight the need for the enforcement of environmental laws.

Through lectures, discussion and case examples, the conferences have provided attendees with proper information in attacking environmental offenses. Speakers from DNR, EPD, and numerous local law enforcement offices have strongly urged the enforcement of the State's very powerful litter laws.

"Litter laws have been overlooked by local law enforcement," said Sergeant Howard Hensley of DNR. "When you call them crimes against the environment instead, well that draws some attention."

The seriousness of these offenses is being addressed and emphasis has been placed on the need to enforce the smallest of crimes - even tossing trash out of a car window - to prevent future and larger illegal dumping violations. Halting the smaller offenses prevents other crimes that could easily lead to the degradation of a community.

Hensley explained that the Georgia Litter Control Law and the Georgia Waste Control Law are the easiest and best-written laws in the state. Officials, from officers up to judges, are simply not educated on the subject. Hensley advises any law enforcement official willing to tackle environmental crimes to meet with other officials up the ladder to ensure proper enforcement of the law.

"This is a really simple law, but you need to meet with the local district attorney, meet with judges and discuss this with them," Hensley said. "Let them know what is going on and let them know that you will be enforcing this law."

"As we go toward the 21st century, we have more responsibility to handle the issue of crimes against the environment," he stressed. "If we get more help in this arena, we can make a difference."

Full Cost Report:

The Solid Waste Management Act requires each local government to calculate and publish its full cost of providing solid waste management services for the most recent fiscal period. Full cost includes the solid waste budget, an allowance for landfill post-closure care, and other expenses, including administrative costs.

Local Governments Report Full Cost Up Slightly

Georgia's local governments reported a full cost of $370.9 million for solid waste services in FY98, up slightly from $362.5 million in FY97. The 2% increase between FY97 and FY98 pales in comparison to the 6.5% increase between FY96 and FY97. On a per capita basis, the full cost of solid waste management equaled $23.36 per person for counties and $76.68 per person for cities.

While the table below summarizes per capita costs for counties and municipalities of various sizes, exact cost comparisons among governments are not possible for three primary reasons. First, some counties may provide solid waste services to a limited population within their jurisdiction - perhaps just the unincorporated areas and a few cities. However, when calculating per capita costs, total county population (rather than that of the limited service area) is used, deflating the per capita cost. Second, governments provide varying levels of solid waste services. Costs from governments providing only minimal collection services are combined and compared with those from governments providing more convenient and frequent collection. Generally, municipalities offer more comprehensive collection services than counties, driving up their expenditures. Finally, survey respondents apply varying methods to calculate the full cost of providing solid waste services. Although DCA offers full cost accounting tools for local governments, it is evident from responses that some simply list their solid waste budgets. Their per capita costs will appear to be lower than those for governments considering the true full cost of providing services.

LOCAL GOVERNMENT SOLID WASTE EXPENDITURES

	Population Group	Number Providing SW Services	Average Expenditures ($ Millions)	$ Per Capita
County	100,000 and Above	6	6.95	20.98
	50,000 - 99,999	8	1.35	16.77
	25,000 - 49,999	18	1.22	34.48
	15,000 - 24,999	29	0.65	31.61
	10,000 - 14,999	17	0.41	31.85
	Less Than 10,000	34	0.21	29.22
	All	112	1.15	23.36
City	50,000 and Above	6	10.96	78.61
	25,000 - 49,999	7	3.01	90.87
	10,000 - 24,999	34	1.38	86.88
	5,000 - 9,999	46	0.57	78.87
	2,500 - 4,999	69	0.25	65.06
	1,000 - 2,499	92	0.09	53.1
	500 - 999	82	0.03	32.66
	499 or less	103	0.02	30.47
	All	439	0.47	76.68

Many local governments charge collection and tipping fees for their solid waste management services. (Please refer to the Solid Waste Collection and Solid Waste Disposal sections of this report.) However, revenues did not cover all solid waste management expenditures. According to their full cost reports, cities recovered 86% of their operating costs through these fees in FY98. Counties were able to recover 76% of their operating costs through collection and tipping charges in FY98.

Recovering Costs - Large Governments vs. Small

In general, the state's larger counties recovered more of their solid waste management costs than smaller-sized counties. Georgia's six largest counties recovered 88% of their costs for providing solid waste services through fees, a huge increase over the 74% recovered in FY97.

However, the 34 counties with the smallest populations, under 10,000 residents, recovered just 56% of their solid waste expenditures through fees in FY98. That percentage has increased, however, from the 34% recovered through fees in FY97.

The average percentage of costs recovered through operating revenues for all Georgia counties in FY98 was 88%. For all local governments, the percentage of costs related to solid waste management activities not recovered by fees was recovered through special taxes, grants or the local government's general fund.

The six largest municipalities fared better than the largest counties by recovering, on average, more than 100% of their solid waste expenditures through fees. On average, these cities took in 12% more than their reported costs. The 346 cities with populations of 5,000 or less recovered, on average, 87% of their reported costs through operating revenues. The average percentage of costs recovered through operating revenues for all Georgia cities in FY98 was 103%, or 3% more than operating costs.

Counties and cities spent their solid waste dollars for various purposes. At 61% of total costs, collection services comprised the majority of solid waste expenditures for municipalities. Counties, however, spent the largest portion of their solid waste dollars on disposal (59%). For all local governments combined, 50% of total costs was spent on collection, followed by 44% spent on disposal, 5% spent on recycling, and 1% spent on solid waste education. Even though municipalities serve only about 35% of the state's population, their total costs comprised 53% of the state's full costs for solid waste management.

The survey asked local governments to report "other dedicated revenues" in addition to operating fees. These revenue sources include ad valorem taxes, local option sales taxes, and grants. By including the other dedicated revenues, cities recovered 91% of their reported costs while counties recovered 88%. The information shows that counties relied more heavily on this type of funding source than cities. Other dedicated revenues contributed 13% of the total revenues for counties and only 5% of total revenues for cities.

EXPENDITURES BY SERVICES PROVIDED

(% of Total Full Cost)	County	City
Collection	37	61
Recycling	4	7
Disposal	59	30
Public Education	1	2

REVENUES BY SOURCE

(% of Total Revenues)	County	City
Collection	49	83
Recycling	3	4
Disposal	47	13
Public Education	1	<1

The largest portion of county solid waste revenues came from collection fees (49%), which is a drastic change from FY97 when only 39% of solid waste revenue was derived from collection fees. In 1997, the largest portion of solid waste revenues was generated through disposal fees. In FY98, 47% of revenues were generated by disposal fees, down from 59% in FY97. For cities, where collection services are generally more comprehensive, collection fees contributed 83% of total solid waste revenues, with only 13% of revenues generated through disposal fees. Both totals changed very little from the previous year.

Local governments have often cited cost as the primary obstacle to recycling and waste reduction efforts. Though only a small percentage of solid waste expenditures goes toward recycling, an even smaller amount is recovered in revenues. In FY98, local governments reported spending $19.9 million on recycling, composting, and mulching activities - only slightly more than they reported spending in FY97. In return, they received $11.7 million in revenues from their efforts, or 58% of their waste reduction expenditures. In comparison, local governments spent $17.5 million on waste reduction activities and received $10.5 million in recycling revenues, or about 60% of their waste reduction expenditures, in FY97.

SWM Grants & Loans:

The State of Georgia assists local governments through grant and loan programs administered by several agencies. These agencies share information on project proposals submitted by local governments to ensure that State support is consistent with statewide solid waste priorities.

Grants, Loans Assist Local Governments

GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS

Local Development Fund (LDF)

The LDF provides funding for a wide variety of local government initiatives. In fiscal year 1998, three LDF grants totaling $24,077 funded solid waste management activities.

GEORGIA ENVIRONMENTAL FACILITIES AUTHORITY

Recycling and Waste Reduction Grant Program

This grant program assisted 41 local governments with recycling and solid waste reduction in FY98. The grant awards totaled $1 million, funding projects such as recycling facilities; recycling and composting public education programs; recycling collection and processing equipment; and establishment of variable rate collection programs. Funding for GEFA's Recycling and Waste Reduction Grant Program was provided by the Solid Waste Trust Fund.

Solid Waste Facility Loan Program

GEFA makes low interest loans available to cities, counties, and local government authorities to fund environmental infrastructure needs. These loans help communities position themselves to attract economic development and help relieve the financial burden required to meet stringent State and federal environmental standards. In FY98, GEFA loaned $6,922,055 to six local governments for landfill expansion and construction.

ENVIRONMENTAL PROTECTION DIVISION

Scrap Tire Management Grants

This grant program helps communities develop scrap tire enforcement programs and related education efforts such as scrap tire recycling, prevention of scrap tire piles, and cleanup of scrap tire piles. Grants are funded through a $1 fee assessed on new tires sold within the state. Participating governments provide a 25% cash match. In FY98, 40 local governments received $631,273 for scrap tire pile cleanups and recycling events. An additional $1,312,894 was distributed to 20 local governments for scrap tire enforcement and education.

A complete list of Solid Waste Management Loan and Grant recipients appears in Appendix C.

SWM Technical Assistance:

Public education and technical assistance is a key component of the State's solid waste reduction effort. It is the State's policy to educate and encourage generators and handlers of solid waste to reduce and minimize to the greatest extent possible the amount of waste requiring collection, treatment, or disposal.

Strategies and Events Lead Local Government Assistance

The agencies of the State of Georgia continued several strategies for educating citizens, local governments, and businesses on proper solid waste management:

- The eighth annual "Bring One for the Chipper" Christmas Tree Recycling Program, held in 124 cities and counties in January 1998, collected 268,535 Christmas trees at 339 sites. Participation decreased slightly from the previous year due perhaps to the greater availability of curbside collection of yard trimmings brought by the ban on yard trimmings at most Georgia landfills. Working with private sponsors, DCA's Keep Georgia Beautiful program coordinated the event and provided publicity tools and tree seedlings to participating communities.

- DCA's waste management staff provided on-going technical assistance to local governments in their overall solid waste management efforts, including full-cost accounting, solid waste related ordinances and contracts, and disposal options.

- Two publications were written to help local government officials handle specific waste management issues. "Dealing with Yard Trimmings" and "Pay as You Throw Collection Systems" were both published and distributed to city and county officials. These documents can also be found at DCA's website, www.dca.state.ga.us.

- The *Georgia Solid Waste Management Plan 1997* was published in December. The new plan, the first update of the original plan published in 1990, will guide the State's solid waste effort over the next five years.

- DCA continued to publish its quarterly newsletter, *The Waste Stream Journal*. The newsletter supplies news and ideas on waste reduction, waste minimization, and litter abatement. It informs more than 2,000 local government officials, recycling coordinators, and individuals of the solid waste management practices, programs, and opportunities offered by the State.

- Keep Georgia Beautiful and P^2AD participated in the Metro KAB Partnership, which was formed to provide a unified voice for solid waste public education in the metro-Atlanta area. The City of Atlanta, the Atlanta Regional Commission, and various corporations also support the Partnership, which spent FY98 organizing and planning activities for the upcoming year.

- In one of the largest recycled products shows in the Southeast, purchasing agents and recycling coordinators from both the public and private sectors crowded the Inforum in Atlanta to get a first-hand look at quality recycled products. Informational programs featured speakers that showed purchasers how to enhance their recycled product procurement programs. DCA helped sponsor the event.

Iron Eyes Cody - Back By Popular Neglect

Ask just about anyone what their favorite public service advertisement is, and many will respond, "That one with the crying Indian for Keep America Beautiful." Entertainment Weekly magazine thought so, too, naming the famous advertisement featuring Iron Eyes Cody crying over a blighted landscape one of the top 50 advertisements of all time. It ranked 38th overall, just below the California raisins and Mikey ("he likes it!"), but ahead of Jerry Seinfeld pitching American Express and Marilyn Monroe posthumously touting Chanel No. 5.

Keep Georgia Beautiful, along with Keep America Beautiful, celebrated the unforgettable image of the "crying Indian" with the release of a new, national advertisement featuring a very compelling re-use of that famous image. "Back by popular neglect" is the theme of the new public service announcement.

The action unfolds at a bus shelter, where people are shown littering the area with food and trash while waiting for their bus to arrive. After focusing on the litter, the camera moves to the image of a saddened Iron Eyes Cody, looming from a poster hung on the shelter wall. A tear falling from his eye and rolling down his face leads to the on-screen message "back by popular neglect."

The advertisement sends a powerful message to a new generation of viewers. Many in today's audience are unaware of the original advertisement, which garnered more than $750,000,000 in free airtime and achieved several billion viewer impressions during its run from 1971 into the 1980s.

- DCA staff organized the first Georgia Recycles Day in conjunction with the first annual America Recycles Day in November 1997. More than 200 organizations in Georgia participated in the statewide event, and 10,200 individuals pledged to recycle. Nationwide, the event was held to encourage people to pledge to recycle more and increase their purchases of recycled products.
- The second annual Recycling Program Development Training was held in June 1998 to offer basic information to communities starting recycling programs. The training combined lectures, interactive exercises, and case studies of successful programs.
- DCA updated its directory of local government recycling coordinators, which includes contacts at colleges, universities, military bases, and individual local governments.
- For the third year, many of Georgia's mayors and county commissioners recorded public service announcements with litter and waste reduction messages for their local radio stations. The messages encouraged people not to litter, reminded them of the yard trimmings ban, and promoted waste reduction and buying recycled products. DCA provided a recording technician and scripts at meetings of the municipal and county associations. Portions recorded by participating local officials were then combined with portions recorded by a professional announcer. The resulting localized PSAs were distributed to appropriate media outlets.
- The Georgia Recycling Coalition signed a contract with DCA to organize and plan Georgia Recycles Day for 1998. DCA will continue to sponsor and oversee the logistics of the program. A GRC consultant will handle the administration and planning of the event.
- DCA and P^2AD participated in a composting workshop to aid experienced composters with their established programs. Hosted by the University of Georgia's Bioconversion Research Center, the training included two days of lectures, discussions, laboratory demonstrations, and hands-on practice. Topics covered included the microbiology of composting, compost marketing, feedstock characterization, equipment and siting considerations, and regulatory concerns.
- The Department of Administrative Services (DOAS) recommended new recycled product purchasing language for the Official Code of Georgia Annotated in order to update the state purchasing guidelines with current market trends. Senate Bill 255, passed and signed into law by Governor Zell Miller, renewed Georgia's commitment to the use of recycled paper. All state agency print jobs, such as publications, annual reports, and brochures are now printed on recycled paper that meets or exceeds federal guidelines.

Several Bills Lead Legislative Action on Solid Waste Issues

Three key recycling and solid waste issues were considered in 1998 by the Georgia General Assembly.

A bill was introduced in the Senate addressing the recycled content paper purchases by State agencies. The bill directed State agencies, authorities, and commissions to spend at least 95% of their printing and writing paper expenditures on paper that meets or exceeds EPA guidelines for minimum recycled content, currently 20%. The bill passed and was signed into law.

Conflicting bills were introduced pertaining to the scrap tire management fee and to the Solid Waste Trust Fund. One bill rescinded the $1 fee collected on every new tire sold in the state prior to its then sunset date of June 30, 2000. The other bill extended the sunset date beyond 2000. No decision was made on this issue until the General Assembly met in 1999. The General Assembly agreed to extend the sunset date to June 30, 2005 and Governor Roy E. Barnes signed the bill into law April 28, 1999, making it effective July 1, 1999.

None of the bills, however, caused as much furor as the highly publicized "Bottle Bill." If passed, it would have required a 10-cent deposit on most beverage containers in an effort to increase recycling and reduce litter. The bill, however, failed to get out of a Senate subcommittee.

First introduced in the 1997 legislative session, the bottle bill was assigned to the Solid Waste Subcommittee of the Senate Natural Resources Committee. The subcommittee, which did not formally consider the issue until 1998, scheduled a hearing, allotting time for both supporters and opponents to speak about the issue. After the discussion, a motion not to send the bill to the full committee passed by a 4-0 vote.

- With the assistance of EPD, DOAS developed a statewide contract for fluorescent lamp and ballast recycling service. DOAS also updated an agency contract to a statewide contract that allowed all state agencies to take advantage of energy-efficient lamps and ballasts.
- In its quarterly newsletter, *From the Source*, P²AD publishes program announcements, case studies, pollution prevention informational articles, and a list of upcoming events. The newsletter is circulated to more than 5,000 persons. Recipients include manufacturing industry representatives, government officials, businesses, and citizens.
- As a sponsor of KAB's *Waste in Place* and *Waste: A Hidden Resource* curricula, DCA's Keep Georgia Beautiful program schedules, publicizes, coordinates, and funds teacher training workshops throughout the state. During the 1998 fiscal year, DCA provided training and curriculum guides to 180 classroom teachers, educational specialists, and administrators who impacted 17,000 students. Keep Georgia Beautiful also hosted eight *Waste in the Workplace* workshops to businesses, reaching 150 participants.
- DCA staff worked with government officials and landfill operators to help them completely understand the annual Solid Waste Survey and Full Cost Report and to assist them in completing the forms accurately. A total of five workshops were held for 72 participants.
- DCA staff participated as instructors on recycling and solid waste planning and explained DCA's role in solid waste management at the Solid Waste Association of North America's (SWANA) Landfill Operators Certification Training at Southern Polytechnic State University.
- The Georgia Hospitality and Environmental Partnership worked with numerous hotels to begin implementation of a hotel-recycling program. This included the formation of a "Green Team" which focused on solid waste issues throughout the hotel industry in an attempt to increase recycling and diversion rates.
- DCA hosted the annual EPA Region 4 State Solid Waste Managers meeting in April 1998. State representatives from throughout the southeast met to discuss solid waste management issues and activities.
- Along with responding to numerous requests for information from local governments, individuals, organizations and media outlets, DCA responded to two national magazine studies – an annual recycling survey for *BioCycle* magazine and a recycling survey for *Waste Age's Recycling Times*.

UGA Bioconversion Center Eliminates Waste Problems

Bioconversion is a big word for a simple idea. In short, it is all about composting materials, and researchers and scientists at the University of Georgia are using it to eliminate waste problems. Simply put, bioconversion is the process of turning waste materials into safe, value-added products.

At the UGA Bioconversion Research and Demonstration Facility in Athens, researchers study how to handle waste by taking various waste products - including animal bedding, industrial by-products and yard trimmings - and composting them. The composted material is then put back into the University landscape as mulch and soil amendments.

The bioconversion research focuses on trimming waste volume, creating alternative products, preventing groundwater pollution, developing soil amendments, using hard-to-convert compounds, and minimizing odors. The seven-acre facility has four acres of windrow composting, complete with viewing areas to study the layers of compost, and enzyme digestion tanks. The four windrows on the site measure eight feet high, 10 feet wide and 140 feet long. Each stack reaches about 140 degrees inside and has to be turned once each month to incorporate all of the material.

Twice each year, the UGA scientists offer training in solid waste management and composting for local government site managers, landfill compost operators, and workers from private operations.

- The third annual "Let's Keep Georgia Peachy Clean" statewide cleanup week was held April 18-25, 1998, and attracted the involvement of 14,213 volunteers. The volunteers were part of the 237 different groups that participated in the event and contributed 22,178 hours of their time to clean 1,600 miles of roadway throughout the state and eliminate 60 illegal dumpsites. The Georgia Peachy Clean Team coordinated the statewide event and provided supplies. Its members include the Georgia Departments of Community Affairs, Public Safety, Natural Resources and Transportation, the Georgia Environmental Facilities Authority, and Georgia's local KAB affiliates.
- In August 1997, Keep Georgia Beautiful hosted the South/Southeast Keep America Beautiful Regional Forum in Savannah. The regional convention, the largest-ever gathering of Keep America Beautiful affiliates, brought together 315 guests from 12 states to discuss the issues of preserving the natural beauty and environment of communities and improving waste handling practices and trends.
- After 20 years of being known as Georgia Clean and Beautiful, the first state affiliate of Keep America Beautiful changed its name to Keep Georgia Beautiful in April 1998. KAB President Ray Empson urged all state and local affiliates to change their names to the Keep _____ Beautiful format to more closely align themselves with the national program.
- In February 1998, Keep Georgia Beautiful organized and hosted the inaugural KAB Institute in Athens. The Institute, which will ultimately consist of three levels of training, was offered to local KAB executive directors throughout the country. Seventeen executive directors from Georgia and 13 state affiliate leaders, along with national KAB representatives, attended the training. The training focused on interpersonal skills, group processes, leadership skills, and community action processes. The Institute offers participants a way to refine their skills and expertise so they can interact with a cross-section of the public.
- Another conference, held in May 1998 offered training in board development, volunteer management and fundraising, for more than 100 KAB executive directors and local board chairmen and members.

P²AD Honors Pollution Prevention Partners

The Pollution Prevention Assistance Division, the Environmental Protection Division, and the Governor's Environmental Advisory Council sponsored a Governor's Pollution Prevention and Environmental Conference in October 1997.

The conference featured a series of break-out sessions on the latest information about environmental issues in Georgia. The conference also included a town hall meeting for all participants to ask government officials and legislators questions about the environmental issues facing the state.

At the closing luncheon, P²AD recognized companies certified in the Pollution Prevention Partners program and presented the first annual Governor's Awards for Pollution Prevention to companies, non-profit groups, academic institutions, local governments and individuals. Each winning project had to meet the Environmental Protection Agency's definition of pollution prevention, as "the use of materials, processes, and practices that reduce or eliminate the creation of pollutants or wastes at the source."

Some examples included inventory management, revision of purchasing procedures and policies, source reduction, process modifications, housekeeping/good operating practices, material substitution, redesign of product, pollution prevention education/outreach, and in-process recycling.

- In an effort to provide local governments with easy-to-use, reliable resources on household hazardous waste, P²AD developed and distributed 1,500 copies of the *Guide to Best Management Practices for Household Hazardous Waste and Radon*. The book is designed to assist local governments in answering citizens' inquiries about household hazardous waste. The publication was distributed to county extension agents, health departments, recycling coordinators, KAB affiliates, and fire departments. Every county in Georgia has at least two copies of the publication.
- DCA's Keep Georgia Beautiful program provided ongoing support to local KAB systems through two executive directors' conferences. A September 1997 conference provided up-to-date environmental information as well as a new coordinator training session taught by staff of Keep America Beautiful, Inc.
- On Earth Day in April 1998, Keep Georgia Beautiful and KAB combined to release a new public service announcement featuring Iron Eyes Cody, the crying Indian made famous by the 1971 PSA.
- Keep Georgia Beautiful hosted pre-certification training for Keep Dade Beautiful and Keep Habersham Beautiful.
- In March 1998, Keep Georgia Beautiful hosted its annual awards luncheon funded entirely by corporate sponsors. The luncheon honored 39 organizations and five individuals for outstanding recycling, composting, and environmental improvement efforts. The program also featured a $1,000 scholarship from the Keep Georgia Beautiful Foundation for the Student of the Year. More than 500 people attended the event.

Looking to the Future:

Several important issues are expected to affect Georgia's system of solid waste management in the coming years. These issues fall under the categories of regionalization and consolidation, education and citizen awareness, and planning and research.

Regionalization and Consolidation

With the closure and elimination of vertically expanded, unlined landfills in Georgia, many communities were faced with multiple questions about how their solid waste would be disposed. Some have opened new lined landfill facilities, while others have contracted with the private sector to manage their solid waste. Others, however, have realized that trying to handle this issue all alone does not make environmental or financial sense for their community. Many have entered into regional agreements to handle solid waste. If successful, these regional agreements could become commonplace in the next century.

MIDDLE GEORGIA SOLID WASTE MANAGEMENT AUTHORITY

Ground was broken in 1998 on a new C&D landfill that will be built in Macon County and service Macon, Dooly, and Peach counties. The three counties formed the Middle Georgia Solid Waste Management Authority in 1993, pursuant to the Solid Waste Management Authority Act. The landfill is jointly owned by all three counties and is operated by the Authority. The middle-Georgia counties were able to meet the financial, technical, and public opinion challenges of siting a landfill by pooling their resources. The landfill provides them with an effective waste disposal option that they would not have had otherwise. The three counties paid for the project on a per capita basis, and about half of their contributions came from a Special Purpose Local Option Sales Tax (SPLOST). The remaining funding was received from a series of four GEFA grants for a total of $130,000 over five years to help with the landfill's construction. The formation of the Authority helped answer the questions of how to manage solid waste disposal in an efficient manner and decrease any future costs associated with solid waste management. The Authority hopes to market the facility and take in C&D materials from other areas. The site is also permitted for use as a Subtitle D landfill, which may be developed in the future.

THE RECYCLING BANK OF GWINNETT

Communities are not just looking at regionalization and consolidation to handle their garbage, but also to properly and more effectively handle items that can be recycled. The Recycling Bank of Gwinnett, for example, is a regional recycling facility now in its eleventh year of operation. Over the years, based on the need to reduce the waste stream, provide materials to end users, and provide a cost-effective program, the Recycling Bank of Gwinnett has expanded from a 2,000 square foot drop-off/buy-back center to a 15,000 square foot, 75 tons per day intermediate processing center. In June 1998, it completed a $250,000 expansion to add a 5,000 square foot paper sorting facility and 15,000 square foot work yard. The center currently handles three million pounds of recyclables per month for both the general public and private sector waste haulers operating throughout the metro Atlanta area.

Education and Citizen Awareness

Keep Georgia Beautiful and DCA have been charged with educating the public and offering technical assistance to local governments. Additional education is planned, including some programs that may take some waste reduction issues back to their roots. Many new waste reduction programs are being started everyday throughout the state, and many individuals are becoming involved and interested in the daily operation of these programs, including elected officials. Although DCA offers an annual workshop for recycling coordinators, basic recycling information, such as the economics of recycling, needs to be conveyed to elected officials and other local government staff in order to encourage more interaction and promotion of local programs.

More resource guides are planned, including an in-depth look at the way each city and county in the state manages solid waste. Included with this will be a series of case studies - programs and ideas that have been successfully implemented and can be used as a model for others to follow. An evaluation of existing documents will also be undertaken to measure their effectiveness. Many documents produced by DCA, like the *Recycling Markets Directory*, have changes that take place on an almost daily basis, yet are only updated in a printed format on an annual basis. In fact, each agency - DCA, EPD, P²AD, and GEFA - has a comprehensive web page that offers updated information on solid waste issues and funding. With the increasing availability of the Internet, these agencies will be able to reach Georgians in a manner more timely than ever.

Planning and Research

Many local governments are in the process of revisiting their solid waste management plans and updating their short-term work programs. By doing this, they will reevaluate their priorities based on accomplishments to date, changes in solid waste facility ownership and location, the economic aspects of solid waste management, and shifts in local policies.

Additional planning will be fueled by research expected to be complete during FY99. P²AD is conducting a characterization of five significant non-residential solid waste streams: wood waste, construction and demolition waste, food processing waste, textile fibrous waste, and municipal biosolids. These waste streams were identified during a 1996 survey of landfill operators. The full reports will discuss generation trends, current management options, impediments to recycling/reduction, and market availability. This information will be used to assess areas where markets do not exist or need expanding and to identify technology voids for certain materials.

An additional area of research will seek to increase agricultural utilization of municipal, industrial, and agricultural by-products. P²AD's recycling market development efforts and solid waste pollution prevention efforts will be closely coordinated with the activities of UGA's Centers for Bioconversion and By-Product Utilization. These centers seek to develop value-added products from wastes that can be used as industrial feedstocks or soil amendments.

Other Related Solid Waste Management Factors

While the State is making progress in the areas of planning, research, education, and technical assistance, future efforts could be hindered if funding sources are not sustained or created to finance current and future solid waste management efforts.

Further, the growing realization that all aspects of environmental management are intertwined suggests that State policy makers and agencies should widen their focus. Consider, for example, the impact landfills have on both groundwater and air quality. Rather than treating seemingly separate environmental problems as isolated areas, their interdependence should be recognized. Efforts in all areas of environmental management, regulation, and education must work together to minimize the impact of human activities on the environment.

Appendix A: Governments Not in Compliance With the Solid Waste Management Act

LOCAL GOVERNMENTS NOT SUBMITTING SOLID WASTE MANAGEMENT PLANS

City of Cumming
City of Jasper
City of Lithia Springs
City of Nelson
City of Pine Lake
City of Talking Rock
Pickens County

LOCAL GOVERNMENTS NOT HAVING APPROVED SHORT TERM WORK PROGRAMS

City of Bowersville
City of Chickamauga
City of LaFayette
City of Lookout Mountain
City of Pembroke
City of Rossville
City of Sharon
Taliaferro County
Walker County

LOCAL GOVERNMENTS NOT RESPONDING TO 1998 SOLID WASTE SURVEY AND FULL COST REPORT

City of Andersonville
City of Avalon
City of Broxton
City of Buena Vista
City of Chauncey
City of Coolidge
City of Corinth
City of Damascus
City of Demorest
City of Flowery Branch
City of Luthersville
City of Mineral Bluff
City of Montrose
City of Oconee
City of Payne City
City of Resaca
City of Talmo

The local governments listed in Appendix A became ineligible for State solid waste permits, grants, and loans during FY98 for failing to comply with the Solid Waste Management Act.

Appendix B: Remaining Landfill Capacity

Facility	County	FY98 Tons	Remaining Capacity (Yds³)	Estimated Closure Date
Appling Co. - Roaring Creek PH 1 & 2 (SL)	Appling	13,534.04	28,454	8/1/99
Atkinson Co. - SR 50 (MSWL)	Atkinson	18,702.61	323,632	6/1/28
Central State Hospital - Freeman Bldg. (L)	Baldwin	326.25	54,919	1/31/71
Baldwin Co. - Union Hill Ch. Rd., PH 3 (MSWL)	Baldwin	29,365.90	3,162,300	12/31/50
Chambers R & B Landfill Site #2 (MSWL)	Banks	72,873.44	20,685,210	8/1/42
Chambers R & B Landfill Inc. (MSWL)	Banks	47,278.35	0	In closure
Republic Waste - Oak Grove MSWL SR324 (SL)	Barrow	409,449.64	4,427,446	1/1/06
Bartow Co. - SR294 Emerson (SL) PH 1 (C&D)	Bartow	15,765.36	250,000	1/1/06
Bartow Co. - SR294 Emerson (MSWL) PH 2	Bartow	105,793.04	315,000	7/1/00
Fitzgerald - Kiochee Church Road, PH 2 (SL)	Ben Hill	22,015.53	658,566	8/1/13
Macon - Walker Road PH 2 (SL)	Bibb	91,473.07	3,338,082	10/1/17
Swift Creek Landfill (L)	Bibb	52,354.59	791,998	4/7/08
Swift Creek MSW Landfill (SL)	Bibb	180,267.22	4,115,955	6/19/14
Butts Co. - Pine Ridge Recycling (MSWL)	Butts	277,531.90	11,465,552	12/31/22
Camden Co. - SR110 (MSWL)	Camden	79,718.98	3,081,648	10/1/18
Candler Co. - SR 121 Phase 2 (MSWL)	Candler	8,515.37	564,372	7/1/28
Candler Co. - SR 121 Phase 2 (CD)	Candler	4,640.00	0	In closure
Catoosa Co. - SR 151 W Exp (SL)	Catoosa	118,314.45	NR	NR
Charlton Co. - Chesser Island Road (SL)	Charlton	47,920.48	711,833	7/1/01
Chatham Co. - Chevis Road (L)	Chatham	4,844.16	150	10/31/98
Chatham Co. - Sharon Park (L)	Chatham	14,048.34	250	9/25/98
Chatham Co. - Thomas Avenue (L)	Chatham	19,483.95	2,625	10/31/98
Chatham Co. - Savannah - Dean Forest Road (SL)	Chatham	79,476.69	1,107,326	1/1/10
Superior Sanitation, Little Neck Road, PH 2 (MSWL)	Chatham	258,353.50	7,582,120	6/1/21
Clifton Equipment Rental Company, Inc. (L)	Chatham	83,070.68	0	In closure
Cherokee Co. - Pine Bluff Landfill (SL)	Cherokee	424,149.00	36,537,274	8/30/29
Cherokee Co. - SWIMS - SR 92 PH 4 (L)	Cherokee	85,416.00	28,000	3/1/99
Clarke Co. - Dunlap Road PH 2, 3, 4 (SL)	Clarke	80,602.45	2,259,366	11/24/14
Clayton Co. - SR 3 Lovejoy Site #3 (SL)	Clayton	92,298.01	4,377,996	1/31/23
Cobb Co. - County Farm Road #2 PHS 1, 2, 3 (L)	Cobb	30,086.52	15,600	12/10/98
Cobb Co. - Cheatham Road PH 2 (SL)	Cobb	40.00	0	In closure
Chambers - Oakdale Road/I-285 (L)	Cobb	76,024.00	0	In closure
Coffee Co. - CR 129/17 Mile River (SL)	Coffee	65,313.56	240,000	11/01/06
Columbia Co. - Baker Place Road, PH 2 (SL)	Columbia	72,828.00	761,779	5/31/05
Columbia Co. - Sample & Son (C&D)	Columbia	1,339.00	NR	NR
Cook Co. - Taylor Road Adel, PH 1 (SL)	Cook	19,760.42	0	In closure
Cook Co. - Taylor Road Adel (L)	Cook	0	194,990	1/1/51

Facility	County	FY98 Tons	Remaining Capacity (Yds^3)	Estimated Closure Date
Cordele - US 41 S PH 2 (SL)	Crisp	97,330.60	0	In closure
Crisp Co. - US 41S Site 2 PH 4 (MSWL)	Crisp	29,896.64	1,362,876	10/01/07
Dawson Co. - Shoal Hole Road (SL)	Dawson	15,441.90	47,472	8/31/99
Decatur Co. - SR 309 Bainbridge PH 2 (SL)	Decatur	27,870.87	477,400	1/31/07
DeKalb Co. - Seminole Road PH 2 (SL)	DeKalb	60,149.00	479,981	7/1/03
Land Reclamation - Rogers Lake Road (C&D) (L)	DeKalb	102,506.74	648,365	1/1/03
APAC/GA - Donzi Ln. PH 5B (L)	DeKalb	403,904.29	2,577,888	5/1/04
Phillips-Scales Road C&D (L)	DeKalb	172,367.91	592,813	7/1/99
WMI - Live Oak #2 (SL)	DeKalb	1,278,987.88	4,525,573	2/15/01
BFI - Hickory Ridge (MSWL)	DeKalb	519,343.47	4,445,113	6/1/04
BFI - East DeKalb Landfill, Inc. (C&D)	DeKalb	107,126.14	3,954,594	5/1/32
DeKalb Co. - Seminole Road PH 2A, 3 & 4 (SL)	DeKalb	248,709.00	11,745,650	11/1/18
Dodge Co. - CR 274 (Dodge Ave.) Eastman (SL)	Dodge	11,895.48	0	In closure
Dooly Co. - CR 101 (SL)	Dooly	13,762.21	0	In closure
Dougherty Co. - Fleming/Gaissert Road (SL)	Dougherty	144,467.58	1,365,000	2/1/05
Oxford Solid Waste Landfill - Turner Field Road (L)	Dougherty	78,617.77	8,500	2/28/99
Douglas Co. - Cedar Mtn/Worthan Rd. PH 1 (SL)	Douglas	32,589.74	30,073	7/30/99
Effingham Co. - SR 17 Guyton (SL)	Effingham	12,559.49	0	In closure
Elbert Co. - Hull Chapel Road PH 1 (SL)	Elbert	15,648.01	71,657	6/1/00
Emanuel Co. - SR 297 Swainsboro (SL)	Emanuel	16,254.00	0	In closure
Evans Co. - Sikes Branch Claxton (L)	Evans	3,686.12	61,559	1/31/03
Fayette Co. - 1st Manassas Mile Road Nside (L)	Fayette	2,838.88	0	In closure
Floyd Co. - Berry Hill Road (SL)	Floyd	106,675.00	0	In closure
Rome Walker Mountain Road, Site 2 (MSWL)	Floyd	8,778.52	0	In closure
Hightower Road, Phase 4 (MSWL)	Forsyth	9,577.84	0	In closure
Franklin Co. - Harrison Bridge Road PH 1 (SL)	Franklin	11,341.98	335,381	10/28/15
Chadwick Road Landfill, Inc. (L)	Fulton	290,290.00	4,539,835	4/1/06
Chambers - Bolton Road (SL)	Fulton	133,289.00	41,852	11/15/98
Atlanta - Gun Club Road (SL)	Fulton	11.00	0	In closure
Atlanta - Cascade Road (SL)	Fulton	11.00	0	In closure
Atlanta - Key Road (SL)	Fulton	20.25	0	In closure
Atlanta - Confederate Avenue (SL)	Fulton	6.00	0	In closure
Eller - Whitlock Avenue (L)	Glynn	21,297.00	0	7/31/98
Glynn Co. - Cate Road (SL)	Glynn	10,345.69	0	In closure
Glynn Co. - Cate Road (L)	Glynn	108.94	0	In closure
Gordon Co. - Redbone Ridges Road (SL)	Gordon	58,727.08	11,363,489	6/1/03

Facility	County	FY98 Tons	Remaining Capacity (Yds^3)	Estimated Closure Date
Cairo - 6th Ave (SL)	Grady	17,026.26	261,000	3/1/06
WMI - B J Landfill PH 3 & 4 (SL)	Gwinnett	28,679.90	55,000	4/15/00
Button Gwinnett-Arnold Road PH 3 (SL)	Gwinnett	94,532.00	157,928	9/15/99
UWL Inc. - Richland Creek Road (SL)	Gwinnett	701,369.90	12,888,880	3/1/15
Habersham Co. - SR13 (MSWL)	Habersham	24,786.84	1,186,566	1/1/31
Hall Co. - Candler Road (SR 60) (MSWL)	Hall	57,183.43	6,832,685	8/3/54
Hall Co. - Allen Creek PH A (SL)	Hall	3,254.57	15,272	11/24/07
Reliable Tire Service, Monroe Drive (C&D)	Hall	90,899.10	3,217,916	10/15/12
Haralson Co. - US 78 Bremen PH 2 (SL)	Haralson	32,999.52	35,963	1/1/99
Houston Co. - SR 247 Klondike (SL)	Houston	142,822.23	6,162,683	2/2/26
Jasper Co. - SR 212 Monticello (SL)	Jasper	5,521.59	27,090	1/1/01
Jeff Davis Co. - CR 20 (L)	Jeff Davis	1,004.03	88,575	5/31/20
Jeff Davis Co. - CR 20 (SL)	Jeff Davis	1,474.00	0	In closure
Jefferson Co. - US 1 (Avera Road) (SL)	Jefferson	13,492.00	4,856	7/30/98
Jenkins Co. - CR54 Phase 2 MSWL & C&D	Jenkins	8,699.06	891,782	11/1/49
Lamar Co. - Regional Solid Waste Authority (MSWL)	Lamar	0	1,068,000	3/1/06
Lamar Co. - Grve St. Ext. (Old Mlnr Rd.) (SL)	Lamar	95,607.68	0	In closure
Laurens Co. - Old Macon Road (MSWL)	Laurens	44,650.26	268,295	7/1/02
Liberty Co. - Limerick Road (L)	Liberty	8,035.00	545	2/4/99
US Army - Ft. Stewart Main Cantonment (SL)	Liberty	22,814.00	994,825	1/1/20
US Army - Ft. Stewart Main Cantonment (L)	Liberty	3,888.00	8,750	7/1/99
Valdosta - Wetherington Lane (SL)	Lowndes	29,663.19	21,273	3/31/99
Pecan Row Municipal Solid Waste Landfill (MSWL)	Lowndes	244,420.24	4,206,482	9/23/10
Lumpkin Co. - Barlow Homes Road PH 2 (SL)	Lumpkin	1,240.00	0	12/31/98
McIntosh Co. - King Road (SL)	McIntosh	5,412.00	914,884	5/1/57
Monroe Co. - Strickland Loop Road (SL)	Monroe	11,866.63	2,259,448	6/1/58
Murray Co. - US 411 Westside Site 2 (MSWL)	Murray	26,486.61	2,078,152	2/1/30
Murray Co. - US 411 Westside (SL)	Murray	8,130.97	0	In closure
Columbus - Schatulga Rd. W Fill PH 2 (SL)	Muscogee	58,913.38	312,000	12/31/98
Columbus - Pine Grove (MSWL)	Muscogee	6,985.93	6,118,500	2/28/35
Newton Co. - Lower River Rd. Site 2 (MSWL)	Newton	23,601.49	1,919,287	10/1/25
Newton Co. - Forest Tower/Lwr Rvr (SL)	Newton	20,446.99	195,854	5/1/06
Oglethorpe Co. - US 78 C/D Landfill (SL)	Oglethorpe	32,970.71	169,724	1/31/03
Paulding Co. - Gulledge Road N. Tract 1 (SL)	Paulding	15,249.31	4,437	7/1/09
Polk Co. - Grady Road (SL)	Polk	30.27	3,958	1/1/52
Putnam Co. - CR 29 (L) & (SL)	Putnam	37,753.79	203,336	4/1/01
Richmond Co. - Deans Bridge Rd. PH 2C (SL)	Richmond	194,237.45	900,000	7/1/01
US Army - Fort Gibson Rd. PH 1-3 (SL)	Richmond	10,854.85	219,949	10/1/15

Facility	County	FY98 Tons	Remaining Capacity (Yds^3)	Estimated Closure Date
Spalding Co. - Griffin/Shoal Creek Rd. PH 2 (C&D)	Spalding	19,681.88	261,628	12/30/04
Stephens Co. - SR 145 PH 2 & 3 (SL)	Stephens	1,605.21	43,133	1/1/06
Southern States - SR 90 / SR 137 Charing (SL)	Taylor	750,840.00	36,697,026	12/25/28
Telfair Co. - S 2316 (SL)	Telfair	15,652.45	0	In closure
Thomasville - Sunset Dr. Phase 4 MSWL HE (SL)	Thomas	115,446.18	4,000,000	4/1/18
Tifton-Omega/Eldorado Road PH 3 (SL)	Tift	33,220.24	710,000	12/31/08
Toombs Co. - S 1898 PH 2 Vert. Expansion (SL)	Toombs	39,690.00	0	In closure
LaGrange - I85 / SR 109 (SL)	Troup	63,889.90	2,775,000	10/1/13
Troup Co. - SR 109 Mountville PH 2 (SL)	Troup	3,149.06	231,802	9/1/34
Twiggs Co. - US 80 (SL)	Twiggs	9,840.54	3,676,895	7/1/67
Walker Co. - Marble Top Road Areas 1-5 (SL)	Walker	72,951.92	0	In closure
Lafayette - Coffman Springs Road (L)	Walker	0	70,920	7/1/41
Washington Co. - Kaolin Road S #3 (SL)	Washington	14,899.02	1,389,307	2/1/45
Wayne Co. - SR23, Broadhurst (SL)	Wayne	211,354.88	7,655,731	7/25/21
Treutlen & Wheeler Counties - SR 46 PH 2&3 (SL)	Wheeler	9,268.42	0	In closure
Whitfield Co. - Dalton, Old Dixie Hwy, PH 6 (SL)	Whitfield	0	11,052,261	7/1/28
Dalton - Old Dixie Hwy PH 2 (SL)	Whitfield	122,570.55	239,000	1/1/01
Dalton - Rocky Face (WS) PH 2 (SL)	Whitfield	39,778.96	30,940	3/1/99
Dalton - Old Dixie Hwy PH 5 (SL)	Whitfield	0	0	In closure
Wilkes Co. - CR 40 (SL)	Wilkes	15,957.18	0	In closure
Worth Co. - SR 112 Sylvester PH 1 (SL)	Worth	2,539.44	0	In closure

Notes: All information pertaining to annual tonnage, remaining landfill capacity and estimated closure dates was supplied by EPD.

The parenthetical designations show the type of landfill as permitted by EPD. Both (C&D) and (L) designations indicate construction and demolition landfills, while (MSWL) and (SL) designations indicate municipal solid waste landfills.

NR Site did not report in time for inclusion in the report.

Appendix C: Grants and Loans to Local Governments

SOLID WASTE LOAN PROGRAM (GEFA)

Recipient	Amount ($)	Purpose
City of Albany	912,500	Acquisition of existing operating C&D landfill
Bartow County	2,000,000	Expansion of the existing Subtitle D landfill, Phase 3
Fitzgerald-Ben Hill SWMA	774,555	Construction of a C & D landfill
Lamar County Regional SW Authority	2,000,000	Construction of a Subtitle D Landfill
Middle Georgia Regional SWM Authority	235,000	Construction of a C & D landfill
Polk County	1,000,000	Expansion of a Subtitle D landfill
Total	**$6,922,055**	

LOCAL DEVELOPMENT FUND GRANTS (DCA)

Recipient	Amount ($)	Purpose
Banks County	10,000	Establishment of a recycling and processing center
City of Comer	4,485	Purchase of equipment for recycling center
City of Rincon	9,592	Purchase of a wood chipper
Total	**$24,077**	

SCRAP TIRE MANAGEMENT ENFORCEMENT/EDUCATION GRANTS (EPD)

Recipient	Amount ($)	Purpose
City of Albany	100,000	Scrap Tire Enforcement
Athens-Clarke County	25,000	Scrap Tire Education
Augusta-Richmond County	83,800	Scrap Tire Enforcement and Education
Barrow County	89,547	Scrap Tire Enforcement and Education
Columbia County	82,119	Scrap Tire Enforcement and Education
Greene County	60,252	Scrap Tire Enforcement and Education
Hall County	89,000	Scrap Tire Enforcement and Education
Hart County	74,037	Scrap Tire Enforcement and Education
McDuffie County	60,125	Scrap Tire Enforcement and Education
Monroe County	36,060	Scrap Tire Enforcement and Education
Morgan County	68,294	Scrap Tire Enforcement and Education
North GA Waste Management Authority	12,514	Scrap Tire Education
Oglethorpe County	53,300	Scrap Tire Enforcement
Paulding County	94,395	Scrap Tire Enforcement and Education
Rabun County	63,798	Scrap Tire Enforcement and Education
Stephens County	55,850	Scrap Tire Enforcement and Education
Upson County	49,000	Scrap Tire Enforcement
White County	76,830	Scrap Tire Enforcement and Education
City of Union City	73,500	Scrap Tire Enforcement and Education
City of Valdosta	65,473	Scrap Tire Enforcement and Education
Total	**$1,312,894**	

SCRAP TIRE CLEANUP GRANTS (EPD)

Recipient	Amount ($)	Purpose
Baldwin County	20,133	Scrap Tire Recycling Event
Banks County	18,810	Scrap Tire Recycling Event
Burke County	21,620	Scrap Tire Recycling Event
Butts County	14,400	Scrap Tire Recycling Event
Chattahoochee County	15,000	Scrap Tire Recycling Event
Clay County	48,095	Scrap Tire Pile Cleanup
Clinch County	14,997	Scrap Tire Pile Cleanup
Crawford County	12,851	Scrap Tire Pile Cleanup
Dawson County	14,250	Scrap Tire Recycling Event
Forsyth County	27,573	Scrap Tire Recycling Event
Franklin County	20,000	Scrap Tire Recycling Event
Greene County	8,400	Scrap Tire Recycling Event
Hall County	27,573	Scrap Tire Recycling Event
Harris County	25,000	Scrap Tire Recycling Event
Hart County	21,000	Scrap Tire Recycling Event
Heard County	17,102	Scrap Tire Recycling Event
Houston County	8,366	Scrap Tire Pile Cleanup
Houston County	25,785	Scrap Tire Recycling Event
Jasper County	8,400	Scrap Tire Recycling Event
Jones County	15,960	Scrap Tire Recycling Event
Lumpkin County	19,000	Scrap Tire Recycling Event
McIntosh County	1,649	Scrap Tire Pile Cleanup
Monroe County	13,605	Scrap Tire Recycling Event
Morgan County	8,400	Scrap Tire Recycling Event
Pike County	9,689	Scrap Tire Recycling Event
Quitman County	10,000	Scrap Tire Recycling Event
Randolph County	14,100	Scrap Tire Recycling Event
Randolph County	7,520	Scrap Tire Pile Cleanup
Stephens County	25,000	Scrap Tire Recycling Event
Stewart County	11,280	Scrap Tire Recycling Event
Talbot County	14,100	Scrap Tire Recycling Event
Towns County	10,000	Scrap Tire Recycling Event
Twiggs County	10,680	Scrap Tire Recycling Event
Union County	18,990	Scrap Tire Recycling Event
Upson County	22,017	Scrap Tire Recycling Event
White County	15,326	Scrap Tire Recycling Event
City of Richland	2,293	Scrap Tire Pile Cleanup
City of Union City	4,342	Scrap Tire Pile Cleanup
City of Valdosta	19,500	Scrap Tire Recycling Event
City of Villa Rica	8,467	Scrap Tire Pile Cleanup
Total	**$631,273**	

WASTE REDUCTION AND RECYCLING GRANTS (GEFA)

Recipient	Amount ($)	Purpose
City of Alpharetta	25,000	Implement a pay-as-you-throw program
Athens-Clarke County	25,000	Establish additional recycling drop-off collection sites
City of Atlanta Department of Parks	14,990	Develop inventory system for cultural recycling program
Baldwin County	25,000	Expand recycling program
Barrow County	25,000	Develop home composting program - tire recycling included
Butts County	25,000	Develop county-wide convenient/recycling center
City of Camilla	25,000	Purchase specialized equipment for recycling program
Carroll County	25,000	Construct a recycling convenience center
City of Centralhatchee	25,000	Construct a recycling convenience center
Chattooga County	25,000	Establish recycling locations and purchase equipment
City of Conyers	25,000	Develop commercial recycling program; containers for cardboard
Dade County	25,000	Erect fenced facilities for household garbage & recycling bins
Dalton-Whitfield County	50,000	Purchase baler for cardboard products and carpet scraps
Dodge County	25,000	Purchase five, 5-bin recycling trailers
Douglas County	5,325	Promote backyard composting to local residents
Floyd County	50,000	Buy roll-off containers, 18-foot trailers and 14-foot trailers
City of Folkston	21,000	Develop multi-activity waste reduction program
Forsyth County	13,979	Purchase recycling containers; improvements to recycling center
Haralson County	25,000	Construct new convenience center, fenced and landscaped
Harris County	40,000	Purchase containers and glass crusher; build two drop-off centers
Heard County	25,000	Build a convenience center
Jackson County	24,463	Purchase a wood chipper for composting program
Jones County	25,000	Complete two recycling convenience centers
City of Lincolnton	25,000	Expand recycling facility
Lowndes County	3,280	Purchase two recycling igloos for aluminum cans and plastics
Madison County	25,000	Purchase recycling trailers, forklift, dump trailer
McDuffie County	75,000	Make 1/2-mile track from recycled tire and rubber products
Monroe County	50,000	Construct a recovered materials processing facility
Morgan County	25,000	Equip five materials collection centers with roll-off containers
City of Mount Vernon	10,000	Purchase 5-bin recycling trailer and truck
City of Nahunta	20,000	Install fiberglass containers for recycling
City of Nicholls	9,300	Purchase a brush chipper for composting program
Oconee County	4,663	Purchase 7-yard dumpster containers for seven schools
Oglethorpe County	25,000	Build three waste & recycling collection sites - staffed and fenced
City of Royston	20,000	Initiate curbside collection of recyclables and carts at residences
City of Senoia	7,500	Education and advertising to promote new recycling program
City of Soperton	5,500	Purchase chipper for organic material and recycling container
Spalding County	25,000	Convert unmanned sites into manned collection centers
Troup County	25,000	Build manned convenience center; provide recycling containers
City of Valdosta	25,000	Enclose and add space to current facility
Walton County	25,000	Purchase recycling containers for proposed convenience sites
Total	**$1,000,000**	

GLOSSARY OF TERMS

Definitions derived from the:	Georgia Comprehensive Solid Waste Management Act (O.C.G.A.12-8-20 et seq.).
Closure	a procedure approved by EPD which provides for the cessation of waste receipt at a solid waste disposal site and for the securing of the site in preparation of postclosure.
Commercial solid waste	all types of solid waste generated by stores, offices, restaurants, warehouses, and other non-manufacturing activities, excluding residential and industrial wastes.
Composting	the controlled biological decomposition of organic matter into a stable, odor-free humus.
Disposal facility	any facility or location where the final deposition of solid waste occurs and includes, but is not limited to, landfilling and solid waste thermal treatment facilities.
Drop-off centers	staffed or unstaffed facilities with collection bins for household solid waste and, usually, recyclables.
Generator	any person in Georgia or in any other state who creates solid waste.
Green boxes	common name for large, unmanned solid waste collection bins.
Industrial solid waste	solid waste generated by manufacturing or industrial processes or operations that is not hazardous waste regulated under the Georgia Hazardous Waste Management Act. Such waste includes, but is not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer and agricultural chemicals; food and related products and by-products; inorganic chemicals; iron and steel products; leather and leather products; non-ferrous metal and foundry products; organic chemicals; plastics and resins; pulp and paper; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textiles; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.
Landfill	an area of land on which or an excavation in which solid waste is placed for permanent disposal and which is not a land application unit, surface impoundment, injection well, or compost pile.
Leachate collection system	a system at a landfill for collection of the leachate which may percolate through the waste and into the soils surrounding the landfill.
Materials recovery facility	a solid waste handling facility that provides for the extraction from solid waste of recoverable materials, materials suitable for use as a fuel or soil amendment, or any combination of such materials.
Municipal solid waste	any solid waste derived from households, including garbage, trash, and sanitary waste in septic tanks and solid waste from single-family and multifamily residences, hotels and motels, bunkhouses, campgrounds, picnic grounds, and day use recreation areas. The term includes yard trimmings and commercial solid waste but does not include solid waste from mining, agricultural, or silvicultural operations or industrial processes or operations.
Municipal solid waste disposal facility	any facility or location where the final deposition of any amount of municipal solid waste occurs, whether or not mixed with or including commercial or industrial solid waste, and includes, but is not limited to, municipal solid waste landfills and municipal solid waste thermal treatment technology facilities.

Municipal solid waste landfill	a disposal facility where any amount of municipal solid waste, whether or not mixed with or including commercial waste, industrial waste, non-hazardous sludges, or small quantity generator hazardous waste, is disposed of by placing an approved cover thereon.
Operator	the person stationed on the site who is in charge of and has direct supervision of daily field operations of a municipal solid waste facility to ensure that the facility operates in compliance with the permit.
Permit-by-rule facility	a solid waste operation that requires notification of EPD within 30 days of commencing activities and compliance with criteria established in DNR rules for that category of operation.
Postclosure	a procedure approved by EPD to provide for long-term financial assurance, monitoring, and maintenance of a solid waste disposal site to protect human health and the environment.
Recovered materials	those materials which have known use, reuse, or recycling potential; can be feasibly used, reused, or recycled; and have been diverted or removed from the solid waste stream for sale, use, reuse, or recycling, whether or not requiring subsequent separation and processing.
Recovered materials processing facility	a facility engaged solely in the storage, processing, and resale or reuse of recovered materials. Such term shall not include a solid waste handling facility; provided, however, any solid waste generated by such a facility shall be subject to all applicable laws and regulations relating to such solid waste.
Recycling	any process by which materials which would otherwise become solid waste are collected, separated, or processed and reused or returned to use in the form of raw materials or products.
Solid waste handling	the storage, collection, transportation, treatment, utilization, processing, or disposal of solid waste or any combination of such activities.
Solid waste handling facility	any facility, the primary purpose of which is the storage, collection, transportation, treatment, utilization, processing, or disposal, or any combination thereof, of solid waste.
Waste-to-energy facility	a solid waste handling facility that provides for the extraction and utilization of energy from municipal solid waste through a process of combustion.
Yard trimmings	leaves, brush, grass clippings, shrub and tree prunings, discarded Christmas trees, nursery and greenhouse vegetative residuals, and vegetative matter resulting from landscaping, development and maintenance other than mining, agricultural, and silvicultural operations.

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Document Number: 0292

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